

ART. VII. EXOTIC FORMS OF SYRPHID FLIES

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(PLATE VIII)

While I was visiting the Carnegie Museum, Dr. Hugo Kahl called my attention to some interesting material in flies of the family Syrphidæ, and I am greatly indebted to him for the privilege of studying this collection which comprises material which has accumulated in the Carnegie Museum collection over a period of years. Most of the material is from Cameroon, Africa, or the Rivers of French Guiana, and Brazil.

Eristalis argyropila sp. nov. (Plate VIII, fig. 10)

Female. Eyes short, brownish, pilose. Upper occiput, except for a narrow eye, contiguous, silver pubescent line stopping at eye-angle, jet black velvet. Just below ocelli the vertex is shining black or bluish, followed by a rectangular black velvet crossband. Remainder of front with its low rounded central raised spot, except for the narrow silver pubescent side margins, shining black. The side margins reach the black velvet. Antennæ dark brown; arista pale yellow, bare. Middle of face and prominent round tubercle vitreous shining black, on either side with vertical bands of brilliant, dense, silvery pubescence. Cheeks a shining black bare triangle. Lower occiput and up to within a short distance from top, entirely silvery pubescent.

Thorax opaque black with a complete ashen band before the suture and another behind. Thorax black before the scutellum. The latter opaque, clear pale lemon yellow, with a narrow jetblack base. Pile of thorax and scutellum black on the black areas, pale on the pale areas; that of scutellum pale yellow.

Abdomen opaque black; second, third, and fourth segments with narrow transverse bands of shining black, not reaching the sides, and on the second expanded laterally into a black spot. Each of these segments with exceedingly narrow yellow hind borders. The black fifth segment is broken by a median transverse shining band.

Femora shining black, baso-dorsally pale pilose and a few long silvery hairs underneath the hind pair. Tibiæ shining reddish brown, the hind pair ending transversely, not produced at all, with an inner middle cicatrix. Hind femora about post middle on outer surface

with a curvi-linear depression. Tarsi dark brown. Wings quite hyaline, an intense, very small, sharply delimited black stigma.

Length, 9.5 mm. One female. Mana River, French Guiana, May 1917, S. M. Klages collector. Type in the Carnegie Museum. An interesting and beautiful little species.

Nosodepus montensis sp. nov. (Plate VIII, figs. 1, 12)

Female. Head large and broad. From a vertical profile (looking down) the head is broad and flat, most of it taken up by the broad flat eyes. Antennal prominence moderately conspicuous. Facial tubercle large, low, evenly rounded. Face considerably descending below eyes. Eyes long, but their pile pale. Whole head, front, vertex, face, cheeks shining black, the upper face on the sides very dark mahogany red. Middle of face with an extremely broad band of pale pubescence from antennal to oral margin. Antennæ black. Third joint markedly widened and expanded and somewhat pointed apico-ventrally. Arista long, black, bare. Pile of vertex, occiput above and below, and that which occurs narrowly beneath the antennæ and along the eye margins, very long and pale. Face and cheeks bare.

Thorax and abdomen everywhere shining black, together with the simple, light brownish yellow scutellum covered with very dense, very long yellowish pile. Squamæ yellow with brownish fringe. Halteres brownish.

All the femora are very dark reddish brown, becoming yellow at the apex. Tibiæ pale honey yellow. Tarsi all black. Pile of legs except on tarsi, and at base of femora and on their dorsal borders, very long shaggy, pale yellow; elsewhere black. Hind metatarsi below with very dense, long bristles. Middle tibiæ apically with a marked claw of six to seven long black round tipped spines. The hind tibiæ lack this development, though a few short spines are present.

Wings tinged with yellow, and with brown about the veins. Marginal cell open. Surface villose.

Length, 13 mm. One female. Colonia Tovar, Aragua, Venezuela, 6000-7000 feet, May 6, 1929, Ernest Holt—Carnegie Museum Expedition. Type in the Carnegie Museum.

I place this form in Speiser's *Nosodepus* provisionally. The species has the appearance of a *Criorhina*. The facial strips of long pile are to be noted. It is obviously not Speiser's *N. minotaurus*. Speiser thinks the genus is close to *Helophilus*.

Volucella kahli sp. nov. (Plate VIII, fig. 5)

Female. Vertex and front, except for a short distance on the sides above the antennæ, dark shining brown or black, the upper front and

vertex convex, beginning abruptly where on mid-front a concavity has been shaved out. Eyes pale pilose. Antennæ dark brown; arista paler, eighteen rayed above, unusually long, and a smaller short row, between dorsal and ventral rows. Face considerably produced downward and with a large obtuse anterior production (in profile) in the middle. Middle of face broadly black, and a very broad stripe between cheeks and face from eye to oral margin shining black. Remainder of pile cream color.

Dorsum of thorax shining blue black with coppery reflections, the humeri and sides of the dorsum broadly, base of scutellum broadly, and a narrow margin as well as all the upper pleuræ, pale cream color. Disc of scutellum brownish, the marginal depression deep, its marginal bristles (three on each side) and those of the margin of thorax black and quite long. Pile of dorsum, pleuræ, and largely that of scutellum pale yellow. Squamæ pale yellow, with brown fringe. Halteres cream color; opaque.

First segment of abdomen and basal half or two-thirds of second, the lateral corners more extensively, pale cream yellow, but more brownish at the junction with the dark color. An oblique oval brown spot on each lateral basal angle of the fourth segment, directed inward. Remainder of abdomen dark brown, bluish in reflection. Legs entirely dark brown, almost black, black pilose.

Wings: the anterior margin strongly yellow, a large rounded blackish spot near apex, but nowhere touching the margin. The stigma is brown.

Length, 8 mm. One female. Mana River, French Guiana, June 1917, S. M. Klages collector. Type in Carnegie Museum.

***Volucella brunnicolor* sp. nov. (Plate VIII, figs. 8, 9)**

Male. Eyes touching for most of length of upper head, thick, long, pale pilose. Vertical triangle exceedingly small, light brown, convex, the close set ocelli, honey yellow. The front very limited to a small space above the antennæ. Upper facets of eye enormously enlarged. Entire face pale, orange brown, shining, subtranslucent. A suggestion of a brown stripe separates cheek and face. Face beneath antennæ pale pubescent. Face pale pilose. Antennæ light orange, the pale arista, with twenty pale colored rays on dorsal side.

Dorsum of thorax, abdomen except as noted, pleuræ, scutellum, legs, everywhere light orange brown. The pile of pleuræ long reddish golden. That of dorsum of thorax long, fine, erect, blackish, with pale hairs intermixed. Scutellum long, fine black, pilose without depression (the merest trace of a depression is indicated or suggested). The bristles of scutellum and sides of thorax reddish. Squamæ concolorous with pleuræ. Halteres ivory colored. Abdomen marked with a narrow transverse black spot on either side of post margin of second seg-

ment, again of third segment, and a vertical mark similarly on fourth segment, none of them reaching side margin; all of them black pilose.

Legs slightly darker on apico-third of tibiæ, the tibiæ black haired. Legs elsewhere pale haired, the tarsal segments with a circlet of black bristles on extreme tips past the golden reddish ones that cover these joints.

Length, 9 mm. One male. Santarem, Brazil, H. H. Smith collector. Type in Carnegie Museum.

Volucella braziliana sp. nov. (Plate VIII, fig. 4)

Female. Eyes bare. Vertex and upper part of front highly polished, dark brown, almost black. Lower front similar, but lighter brown, with a dark spot in the middle right over the antennæ. Face and cheeks light brownish yellow, a narrow stripe from eye to oral margin, separating them; a wider stripe, median from epistoma to base of antennæ everywhere shining and polished. Face pale pubescent, the cheeks posteriorly and the oral section of the post occiput quite pale honey yellow, the humeri and lower prothorax opposite these parts correspondingly colored. Antennæ pale brownish yellow, the inner margin of first joint and a tiny spot at the tip of the third joint, black and not diffuse. Base of arista pale, black apically, fourteen rayed above. Dorsum of thorax and the unusually long, subquadrate scutellum and its strong depression (sub-gen. *Phalacromyia*) all dark bluish black, with coppery and greenish reflections. Pile of thorax short, sparse, erect, pale, the lateral bristles including a few on margin of scutellum black. Pleura shining dark brown with pale brassy pubescence and similar pile. Squamæ pale brown with darker fringe. Halteres pale lemon yellow, opaque but subtranslucent.

First segment of abdomen and base of second, except on the sides and except for a posterior median indentation, pale brownish yellow, thickly short erect yellow pilose. Remaining segments concolorous with dorsum of thorax, the last half of second, all of third subappressed, black bristly; all of the fourth short, erect, pale pilose.

Legs dark shining brown, pile mostly dark, the apical third of fore tibiæ and the hind basitarsi more yellowish brown.

Wings pale brownish yellow tinged, the stigma and a spot in the same cell just distal to it, and one or two very small spots about the cross veins, brownish.

Length, 6 mm. One female. Hyatanahan, Rio Purús, Brazil, April 1922. S. M. Klages collector. Type in Carnegie Museum.

Paragus minutus sp. nov. (Plate VIII, fig. 2)

Male. Eyes narrowly touching. Upper facets enlarged. Vertex a narrow wedge, shining black. Ocelli placed forward, just below them the vertex is silvery pubescent. Front extremely small, shining

blackish. Antennæ dark brown, the third joint a little lighter beneath and four times as long as the second joint, about two and a half times as long as first and second. Arista brown, basally thickened, a little longer than third joint. Third joint perfectly oval, deepest in the middle. Face convex, produced furthest anteriorly just above the oral margin, giving the appearance of a very obtuse production. In color, shining cream colored. There is a faint suggestion of a narrow median stripe, but it is confined to immediately beneath antennæ and just above oral margin. Cheeks very narrow, together with whole oral margin, black. Pile of face sparse, pale.

Thorax, scutellum and abdomen black, shining, punctate, the punctures growing deeper on the scutellum and abdomen where they are quite conspicuous. There are a few very short stubby black teeth on the sides of the scutellum near the base, and one or two such tuberculate nodules on the margin. Pile of thorax very short, erect, pale, bushy tuft of pale brassy pile on the pleuræ behind the humeri. Squamæ pale cream color. Halteres brownish. Narrow lateral margins of abdomen and hypopygium brown, pale pilose, the latter pale pubescent. The appressed black bristles of the dorsum, located in the sparse punctures, are so short as to almost escape notice.

Legs mostly shining dark brown, the narrow apices of the femora, basal third of all the tibiæ and apical third of fore and mid-tibiæ pale yellow. Apical third of all the tibiæ and apical third of fore and mid-tibiæ pale yellow. Apical third of hind tibiæ reddish, concolorous with the reddish yellow or brownish orange hind tarsi; other tarsi brown.

Wings hyaline, stigma brown. Last section of fourth longitudinal vein closing first posterior cell, sigmoid in shape.

Length, 5 mm. including antennæ. One male. Lolodorf, Cameroon, Nov. 17, 1913, Dr. A. I. Good collector. Type in Carnegie Museum.

***Baccha velox* sp. nov.**

Male. Vertex and front black or dark brown. Face light yellow, shining, tubercle prominent, a dark median stripe on face. Antennæ dark brown, third joint rather elongate, twice as long as wide. Arista pale. Occipital fringe and prethoracic fringe or collar long, white haired.

Dorsum of thorax black with a purplish reflection on the sides. Scutellum dark brown. Pleuræ largely brown, a large pale yellow spot on mesopleuræ, the pteropleuræ at least dark brown, the remainder varying degrees of brown. Squamæ pale brown. Halteres similarly colored, ventral scutellar fringe long, but very sparse, and pale in color.

Abdomen practically as long as wings, the second segment of nearly the same width throughout, except that for a short distance at

the base it widens to not quite twice its middle width; abdomen five to six times as long as middle width. The third and fourth segments subequal, each slightly shorter than second, the fifth segment not quite as long as wide. First segment pale yellowish, subtranslucent, the second and the base of the third narrowly subtranslucent dark reddish brown. The remainder of the third segment, a narrow posterior annulus on the second, and all of the fourth and fifth and hypopygium, very dark brown, shining, with a faint violaceous tinge. Pile of abdomen rather long, very sharp bristly and quite appressed, but on the sides of the first, second, and third segments it is long, erect, and pale brassy in color. Legs pale yellow, pale brassy haired, the tibiae outwardly more brownish, strongly brownish on nearly the whole of the hind pair and on the outer half of the hind femora. Ventral base of last two tarsal joints black bipunctate.

Wings strongly margined with brown anteriorly; remainder of wing uniformly light yellowish brown.

Length, 15.5 mm. One male. Efulen, Kamerun, June 24, 1912, Dr. H. L. Weber collector. Type in Carnegie Museum.

Tityusia regulus Hull (Plate VIII, figs. 3, 11)

Psyche, vol. XLIV, no. 4, 1937, p. 119.

This is a curious *Helophiline* Syrphid, apparently making three genera that bear the curious globuliferous hairs on the ventral surface of the hind tarsi. The ventral surface of the abdomen bears a curious circular (bare within) tuft of hairs.

Syrphipogon fucatissimus Hull (Plate VIII, fig. 6)

Psyche, vol. XLIV, no. 4, 1937, p. 120.

This is a mimic of *Euglossa fasciata*. It is, moreover, the largest *Microdontine* fly I have ever seen.

Chrysidimyia chrysidimima Hull (Plate VIII, fig. 7)

Psyche, vol. XLIV, no. 4, 1937, p. 116.

This is one of the many unusual species collected by Mr. S. M. Klages.

EXPLANATION OF PLATE VIII

- FIG. 1. *Nosodepus montensis* sp. nov. (profile of head).
FIG. 2. *Paragus minutus* sp. nov. (profile of head).
FIG. 3. *Tityusia regulus* Hull (hind tarsi).
FIG. 4. *Volucella braziliana* sp. nov. (profile of head).
FIG. 5. *Volucella kahli* sp. nov. (base of abdomen).
FIG. 6. *Syrphipogon fucalissimus* Hull (profile of head).
FIG. 7. *Chrysidimyia chrysidimima* Hull (profile of head).
FIG. 8. *Volucella brunnicolor* sp. nov. (profile of head).
FIG. 9. *Volucella brunnicolor* sp. nov. (abdomen).
FIG. 10. *Eristalis argyropila* sp. nov. (dorsal view of head).
FIG. 11. *Tityusia regulus* Hull (anterior tarsus).
FIG. 12. *Nosodepus montensis* sp. nov. (antennæ, inner surface).

